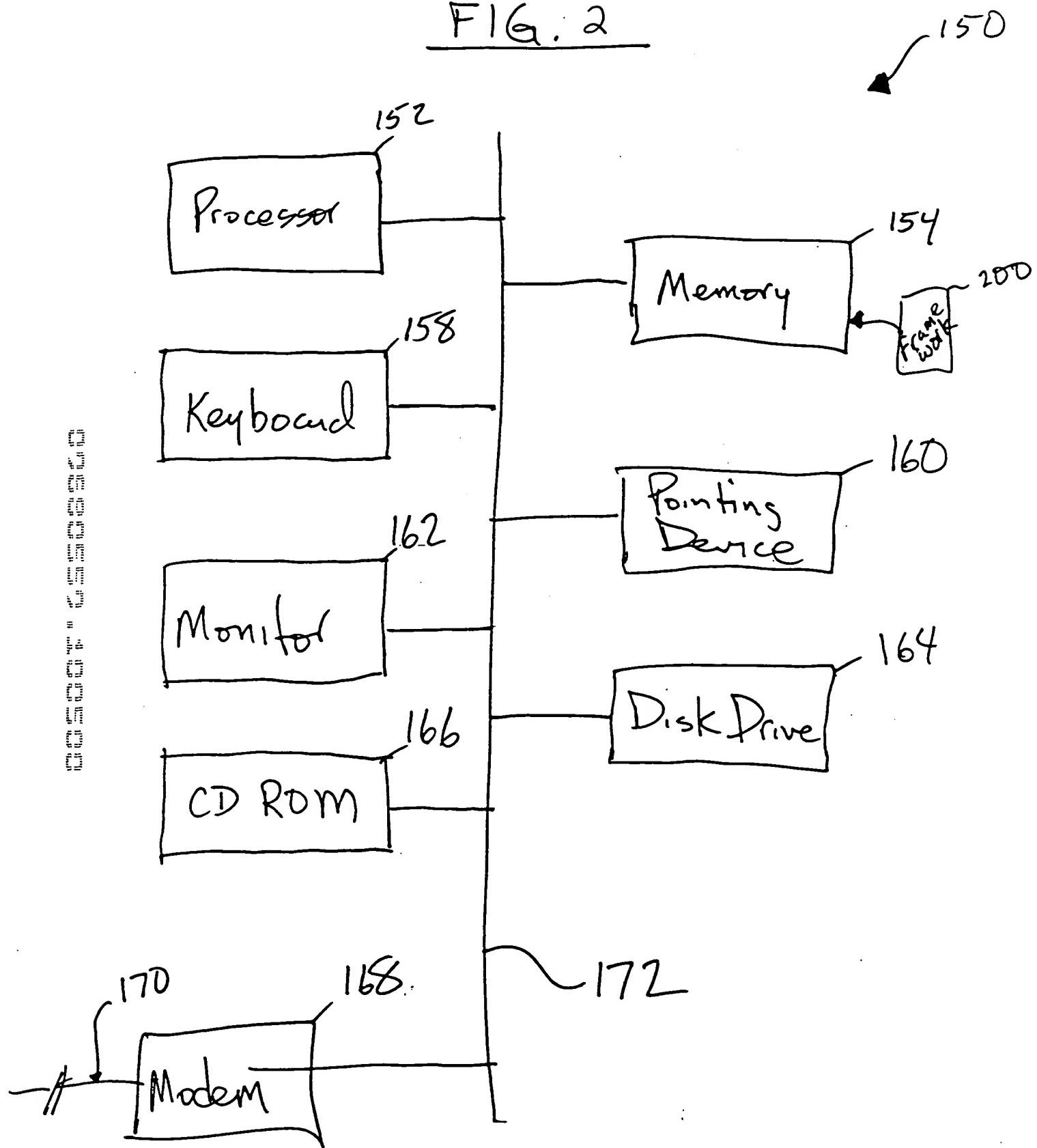
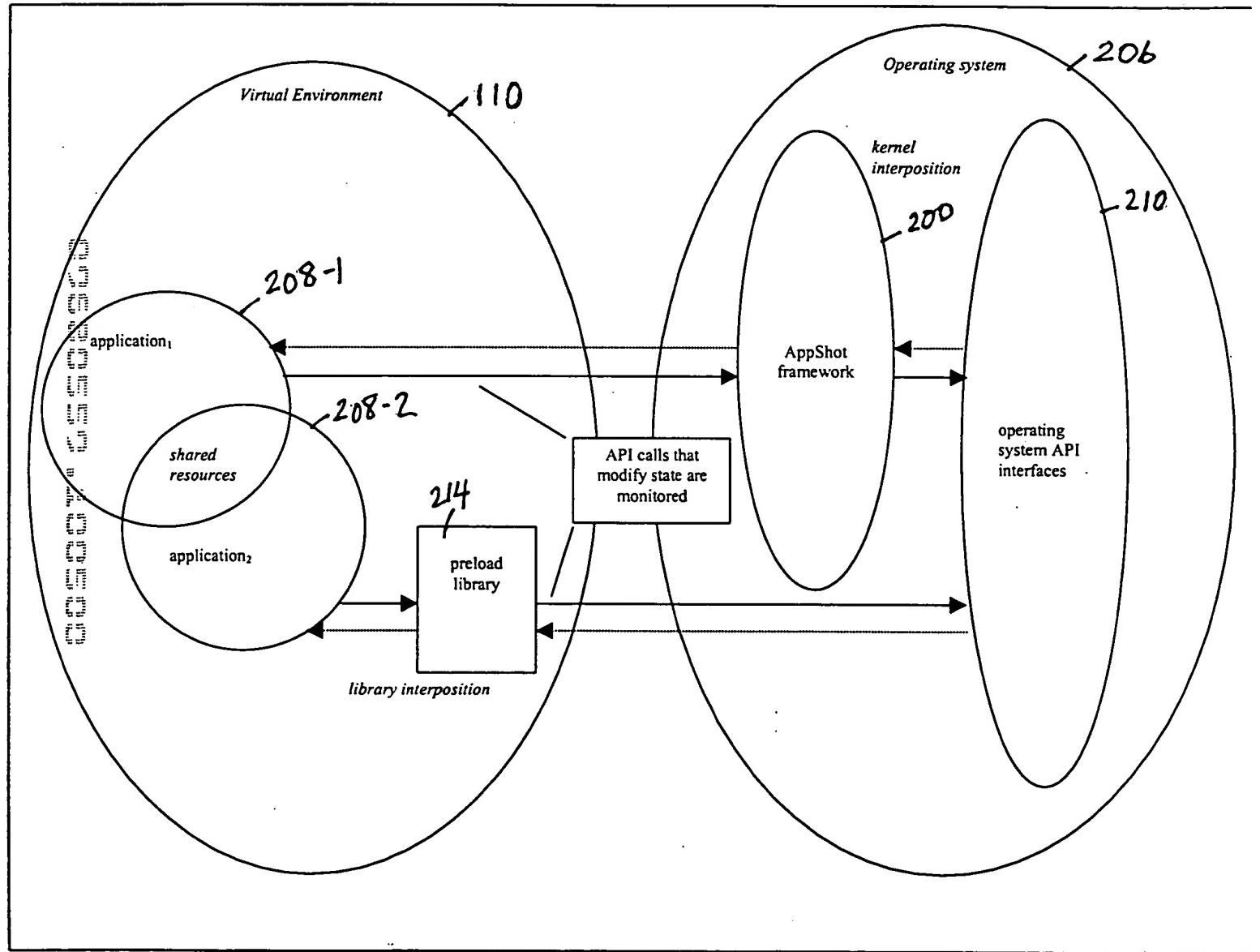


The above diagram illustrates the virtual network environments. Virtual Network Environment 1 contains one application WEB SITE 1, is defined by the Virtual Network Address 10.10.0.1 resides solely on computer 1. Virtual Network Environment 2 contains two applications, WEB SITE 2 and APP 2, and spans two computers, Computer 2 and Computer 3. The virtual network of VNE 2 is 10.10.2.0.

Fig. 1

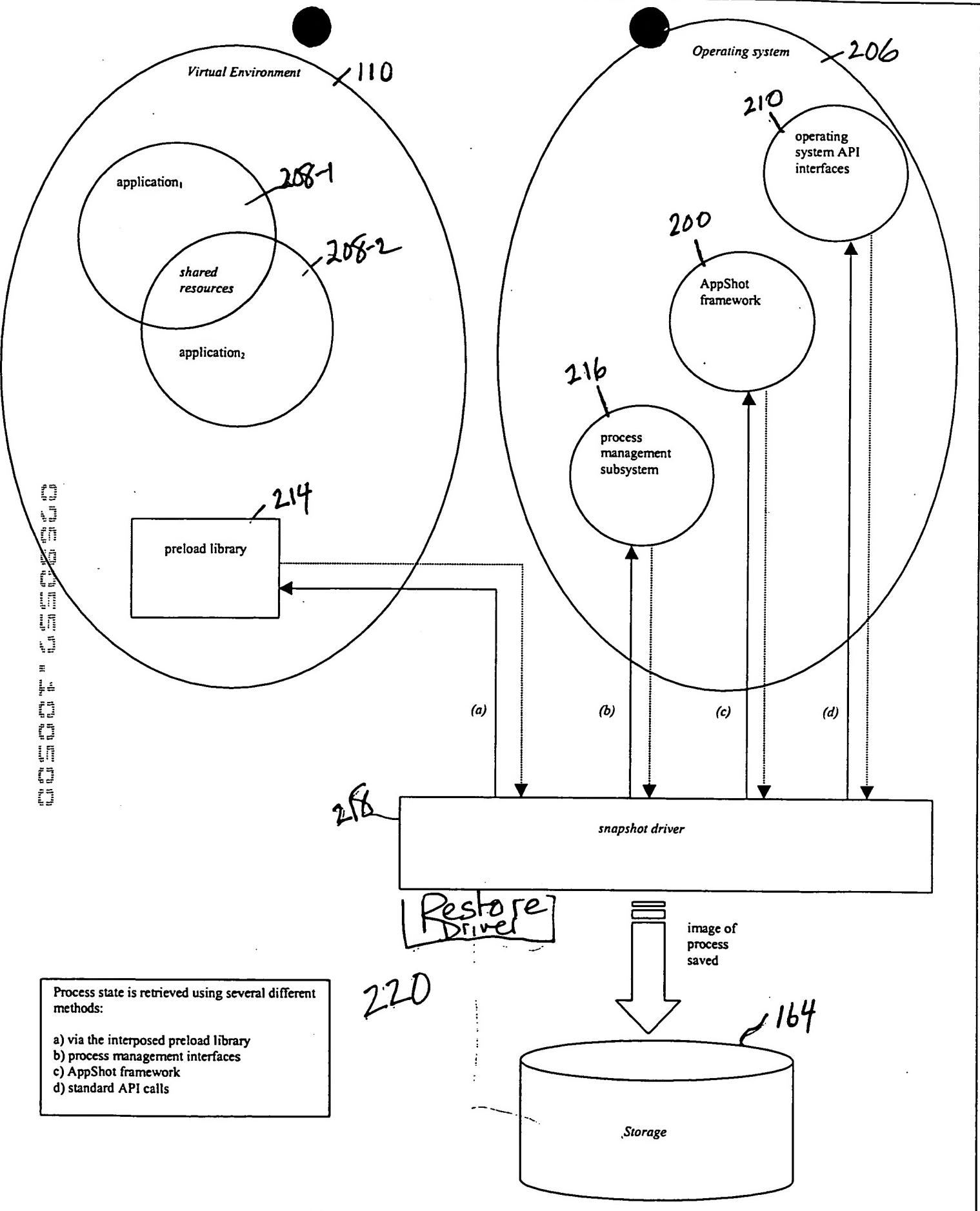
FIG. 2





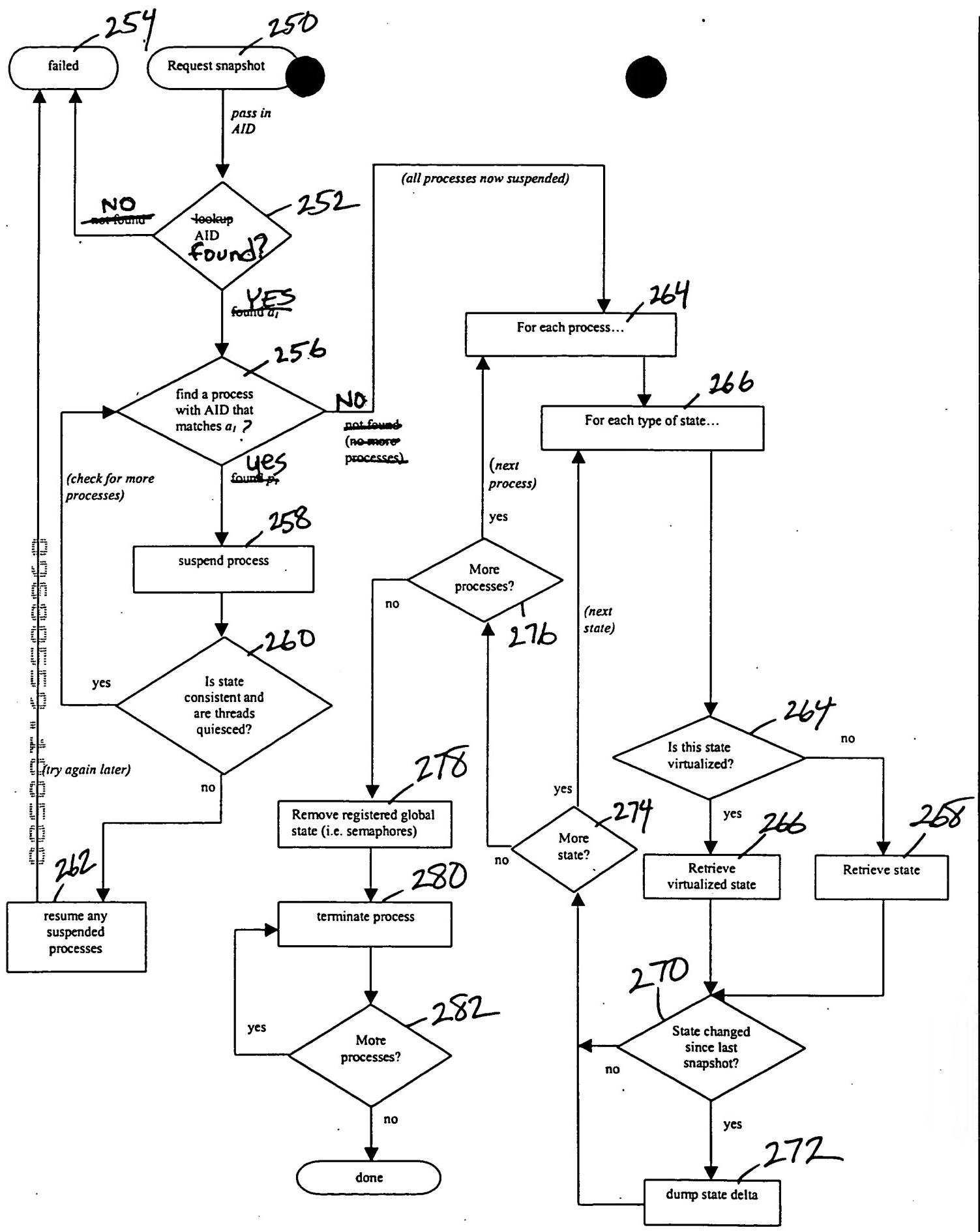
Tracking application state via library and kernel interposition.

F16.3



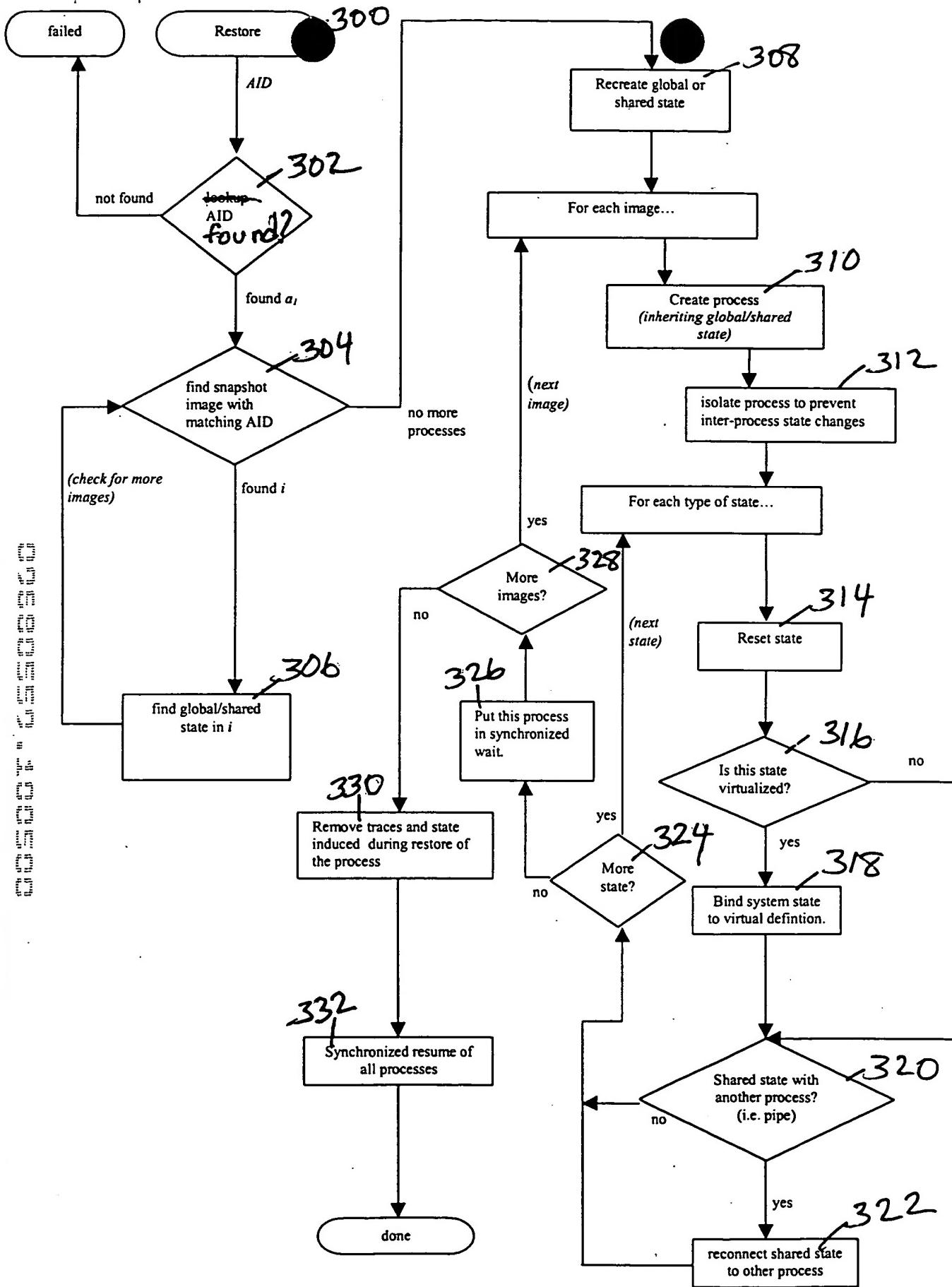
Capture of an application's run-time state.

FIG. 4



Flowchart of snapshot.

F16.5



F16 6

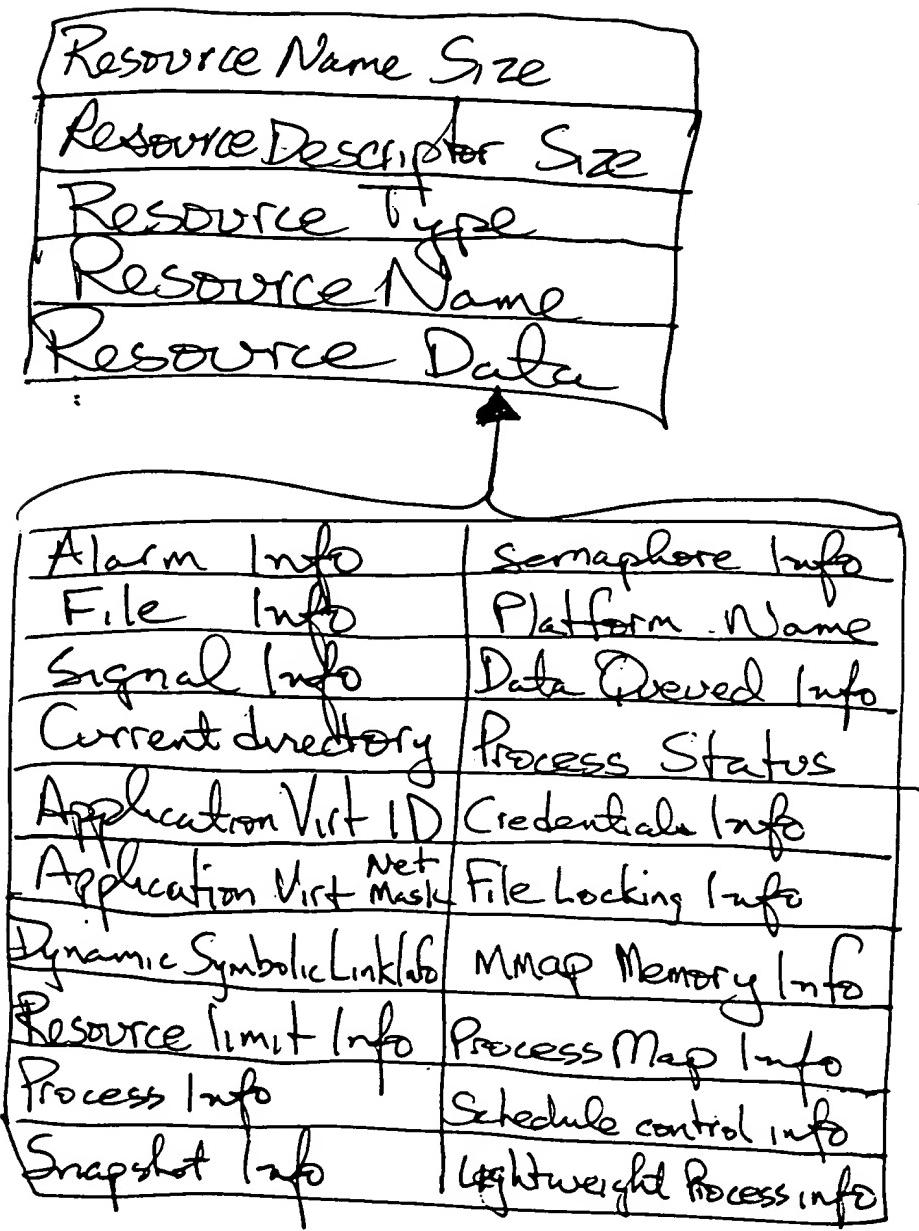


FIG. 7

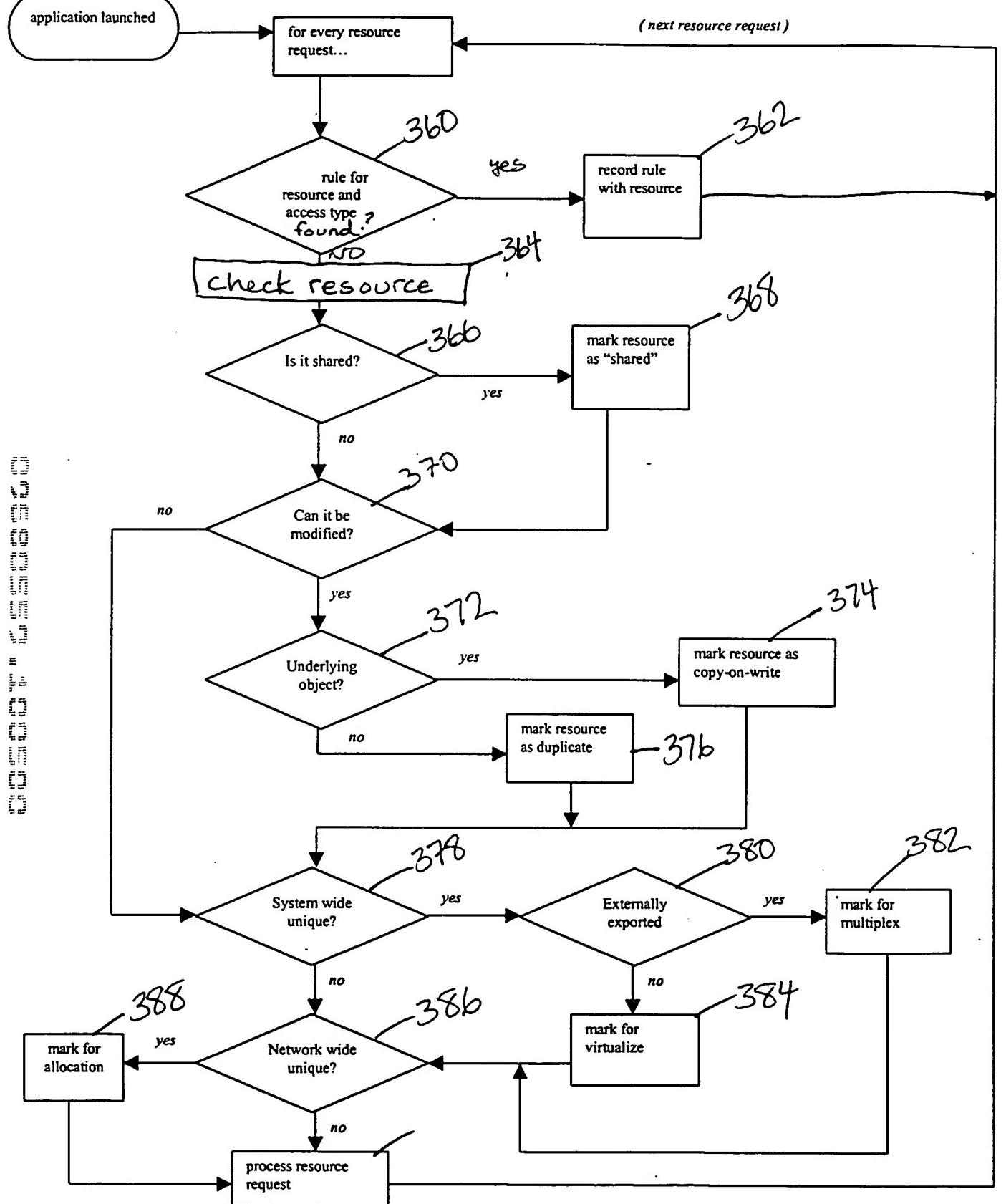


FIG.8

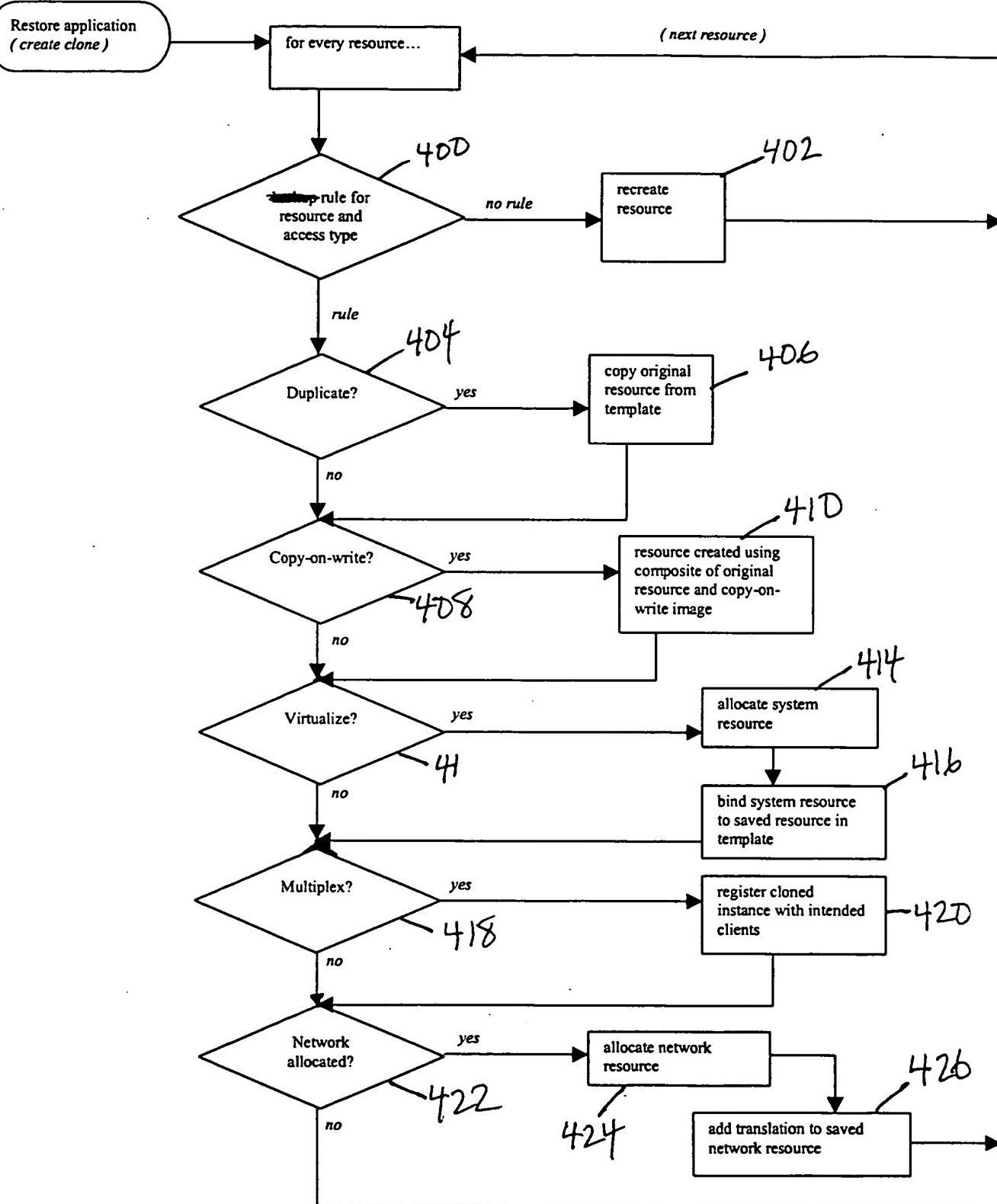
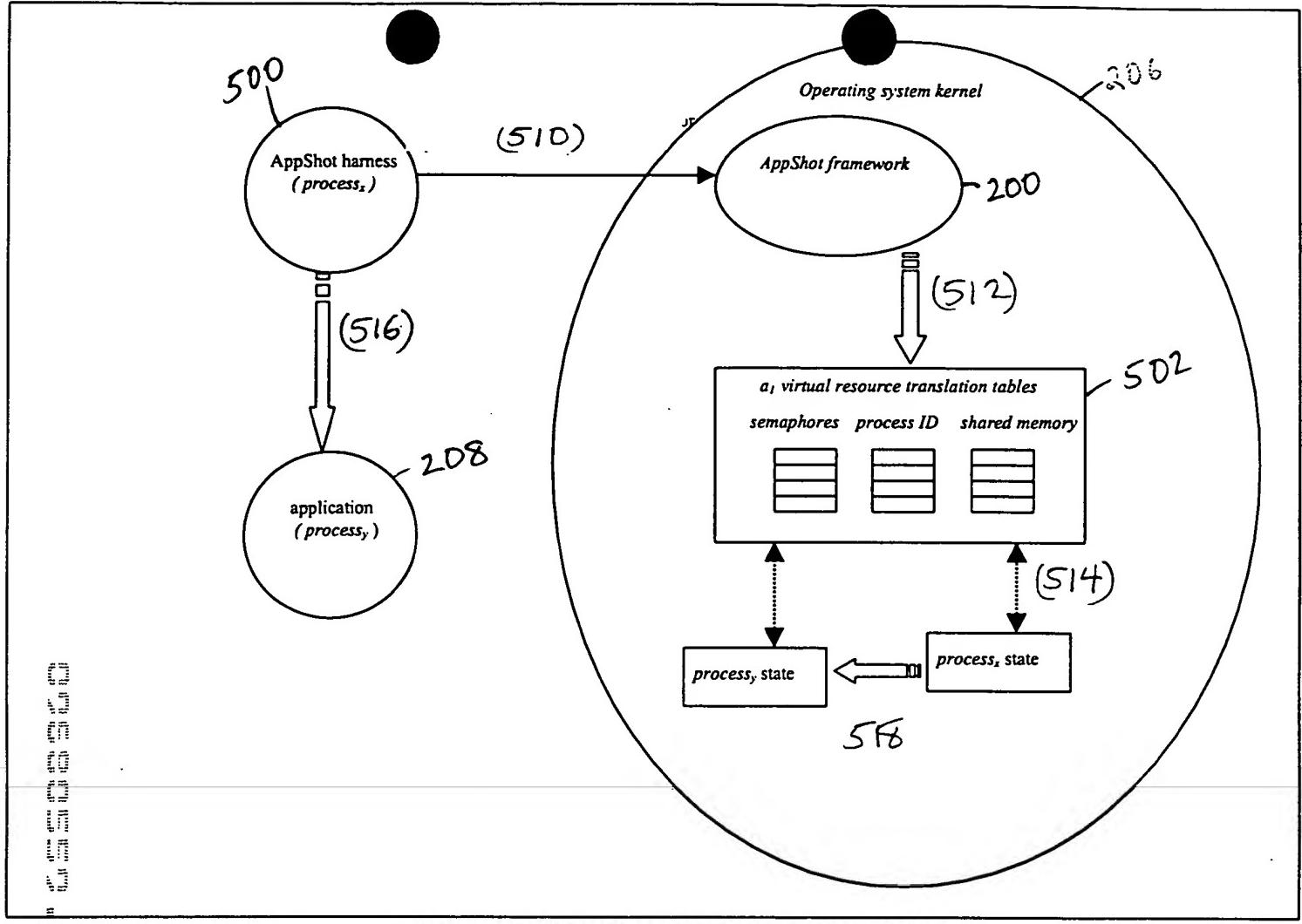


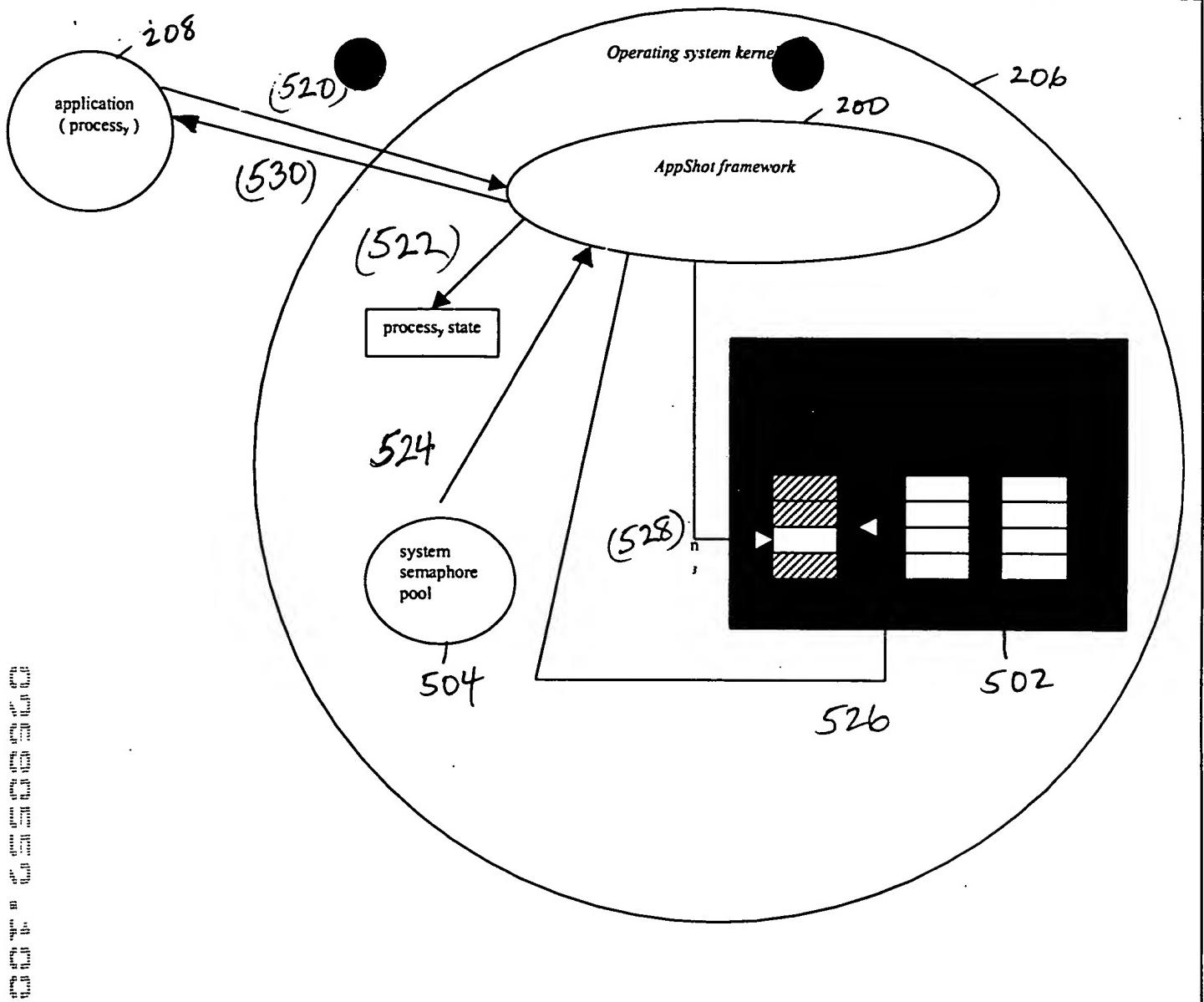
FIG.9



Registration of an application using virtual resource ID's.

0956010000
1422250000

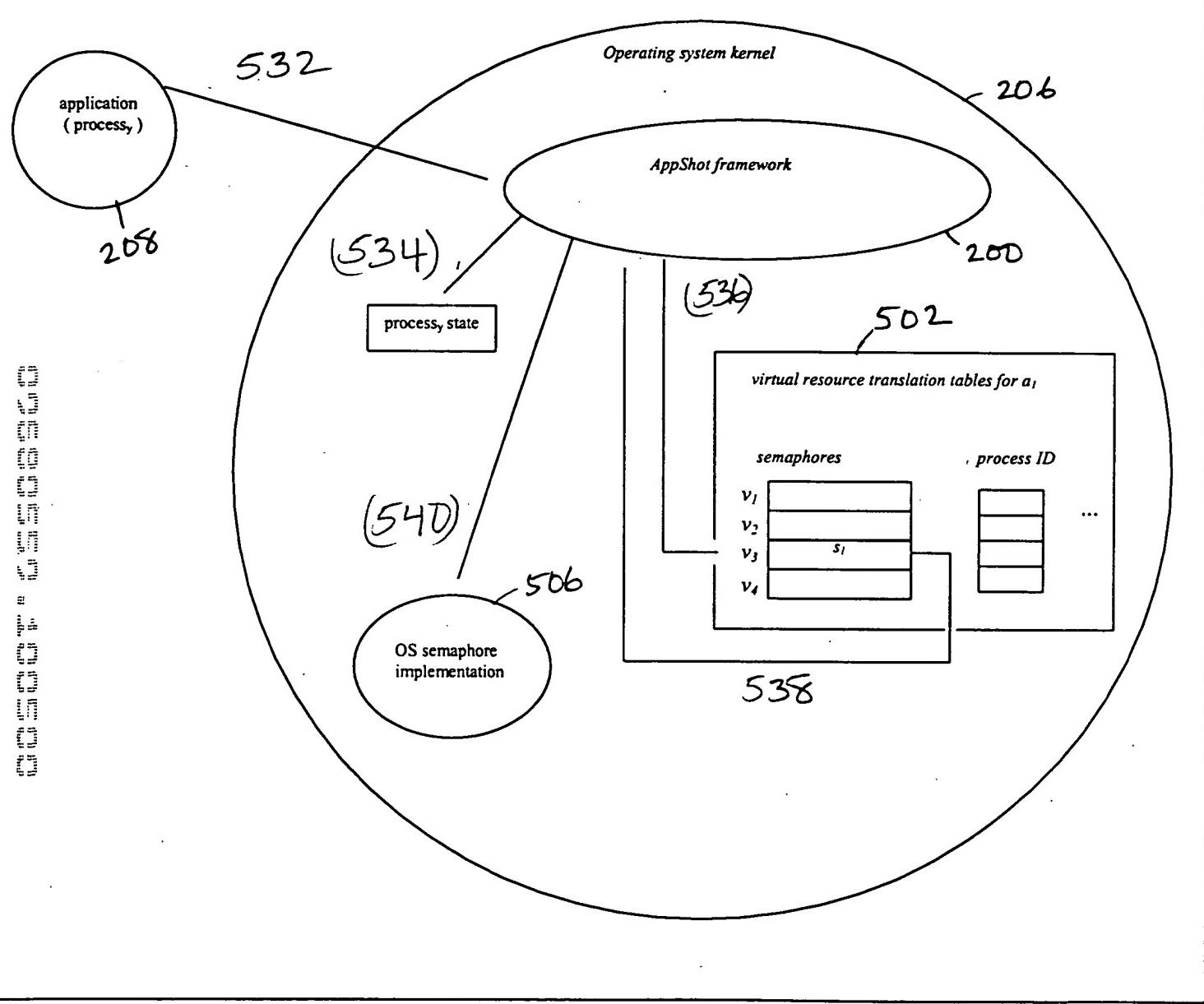
FIG. 10



Allocation of a virtual resource (i.e. semaphore)

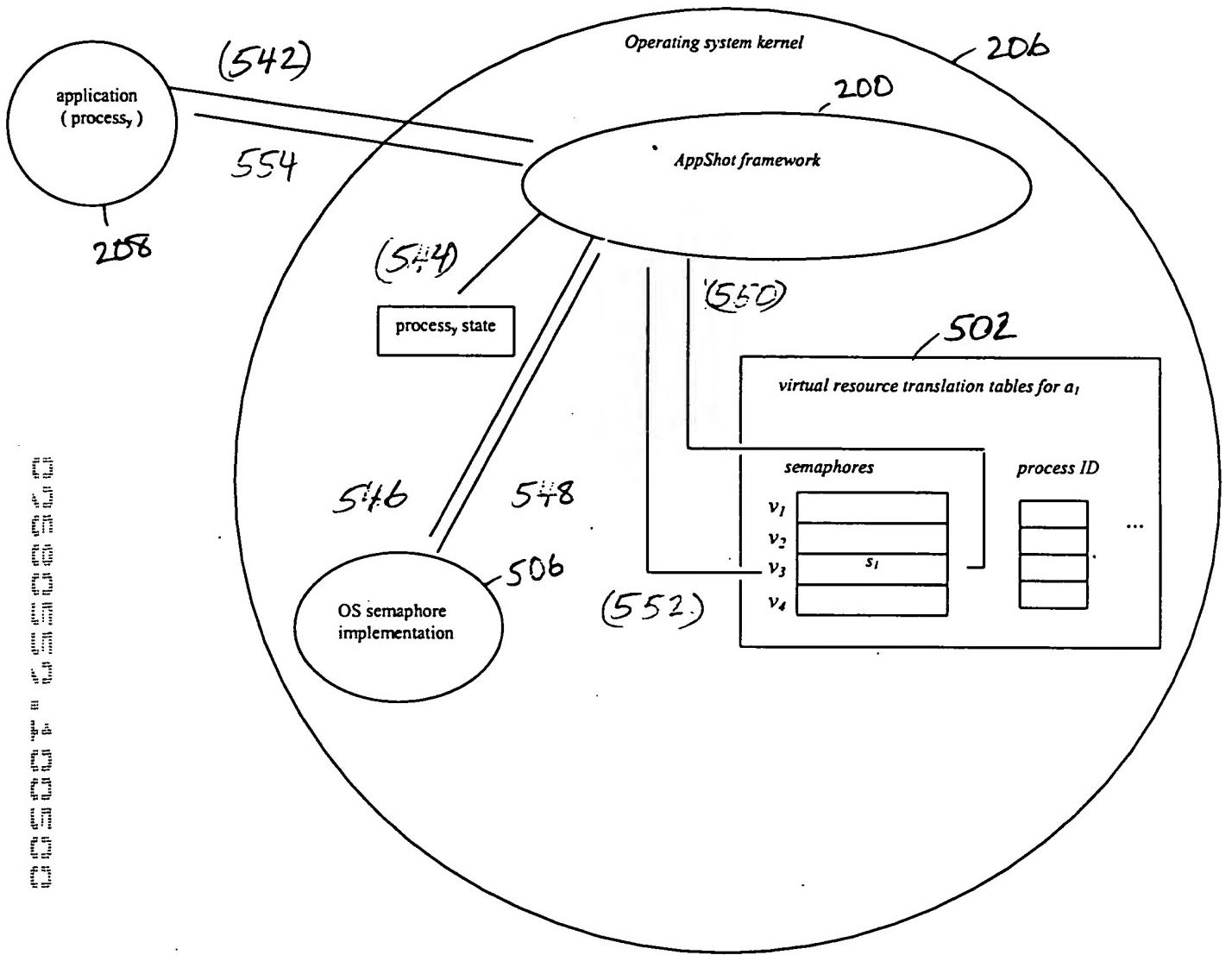
F16.11

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0



Translation of a virtual resource (i.e. semaphore), virtual to system

F16.12



Reverse translation of a virtual resource (i.e. semaphore), system to virtual

F1G.13

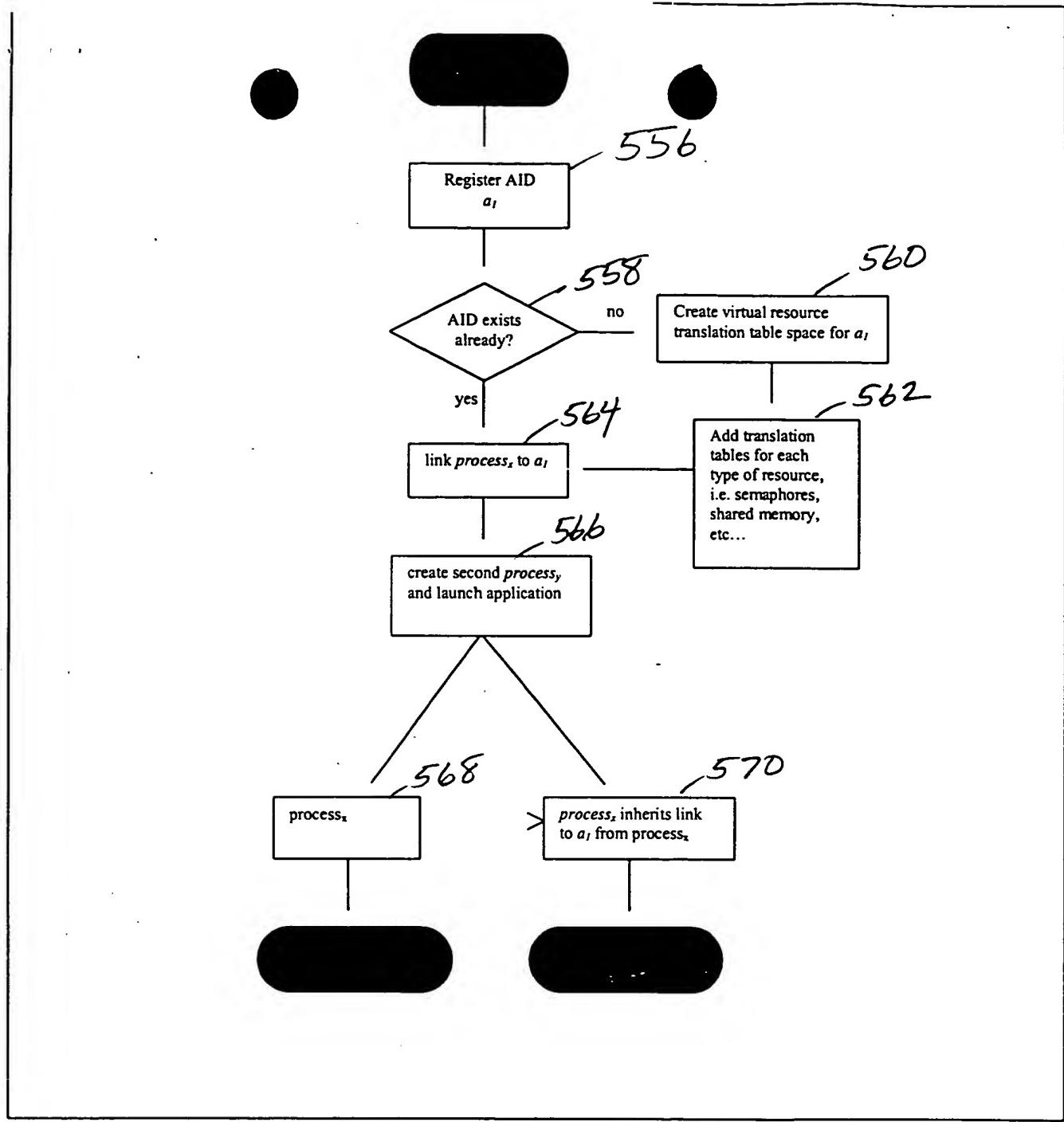
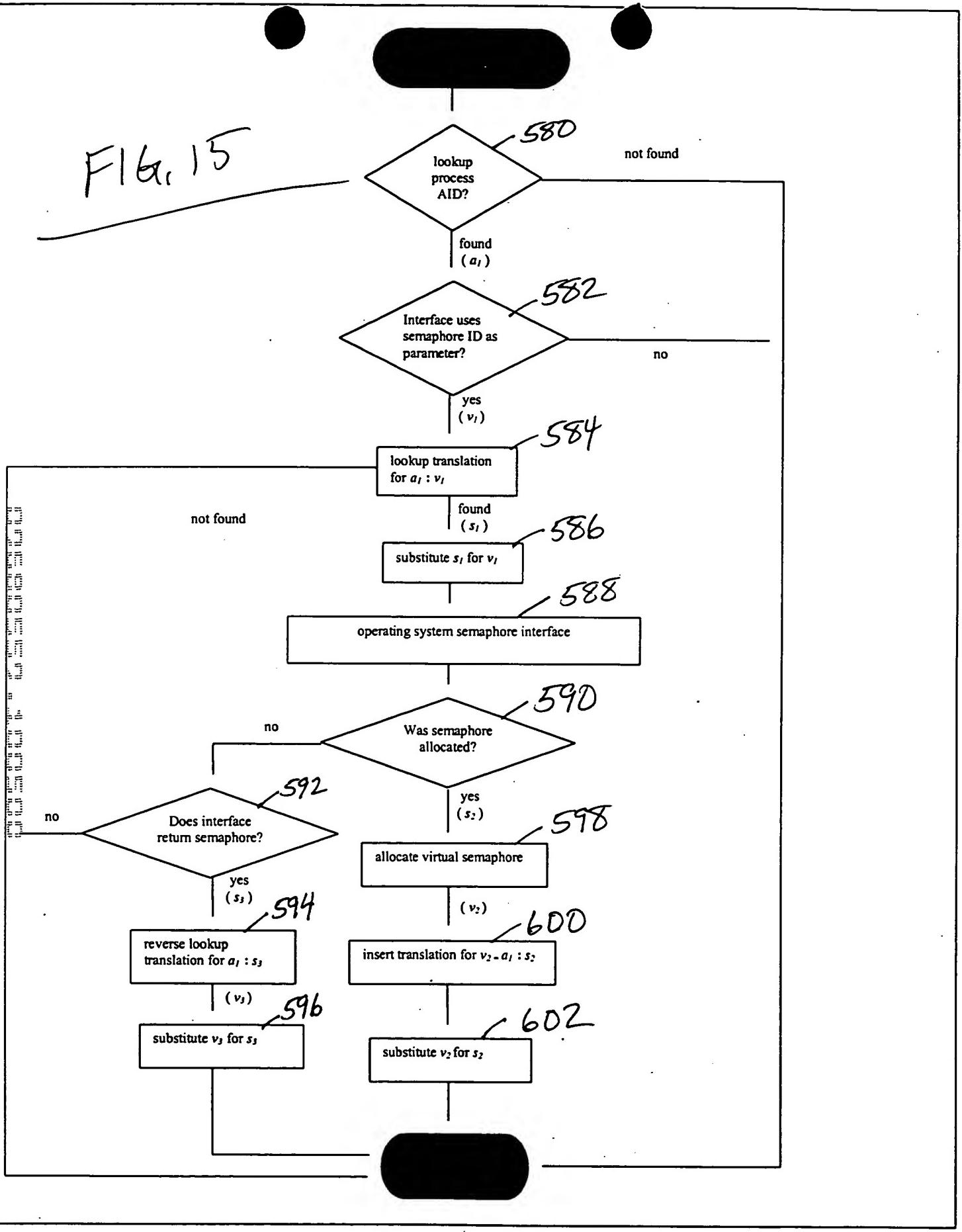


FIG. 14



Flowchart depicting translation of a virtual resource (i.e. semaphore)

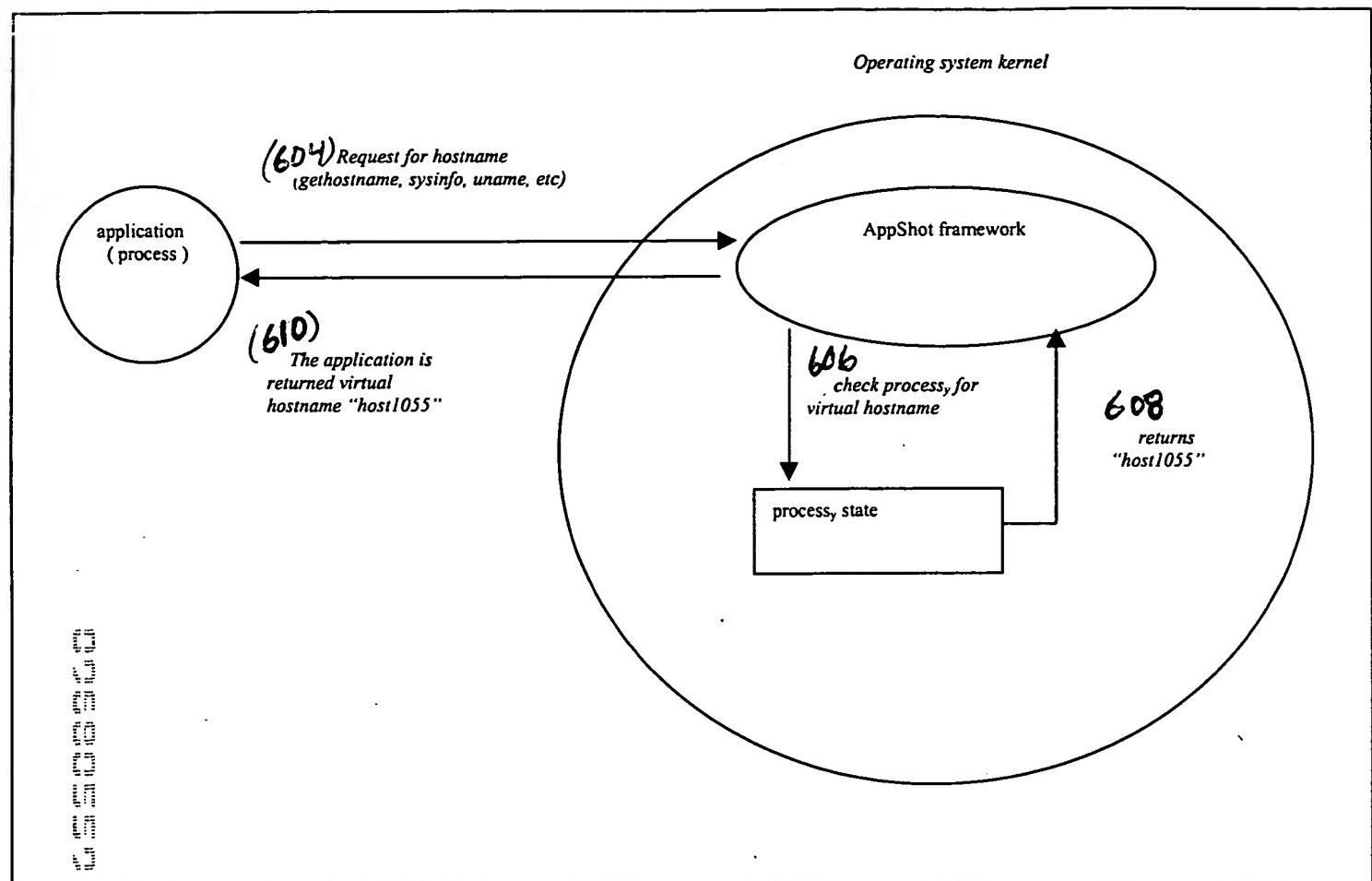


Fig. 16

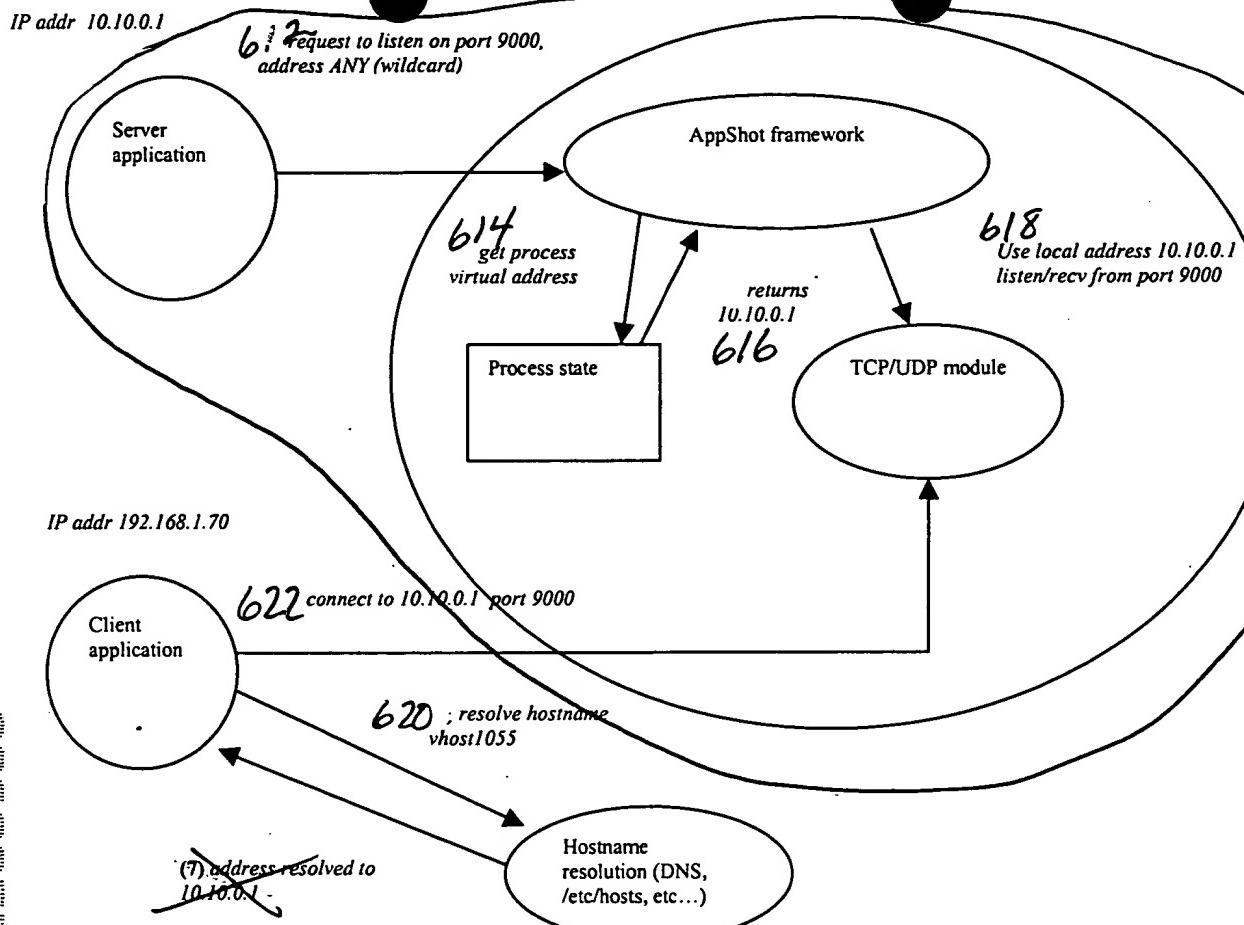


FIG.17

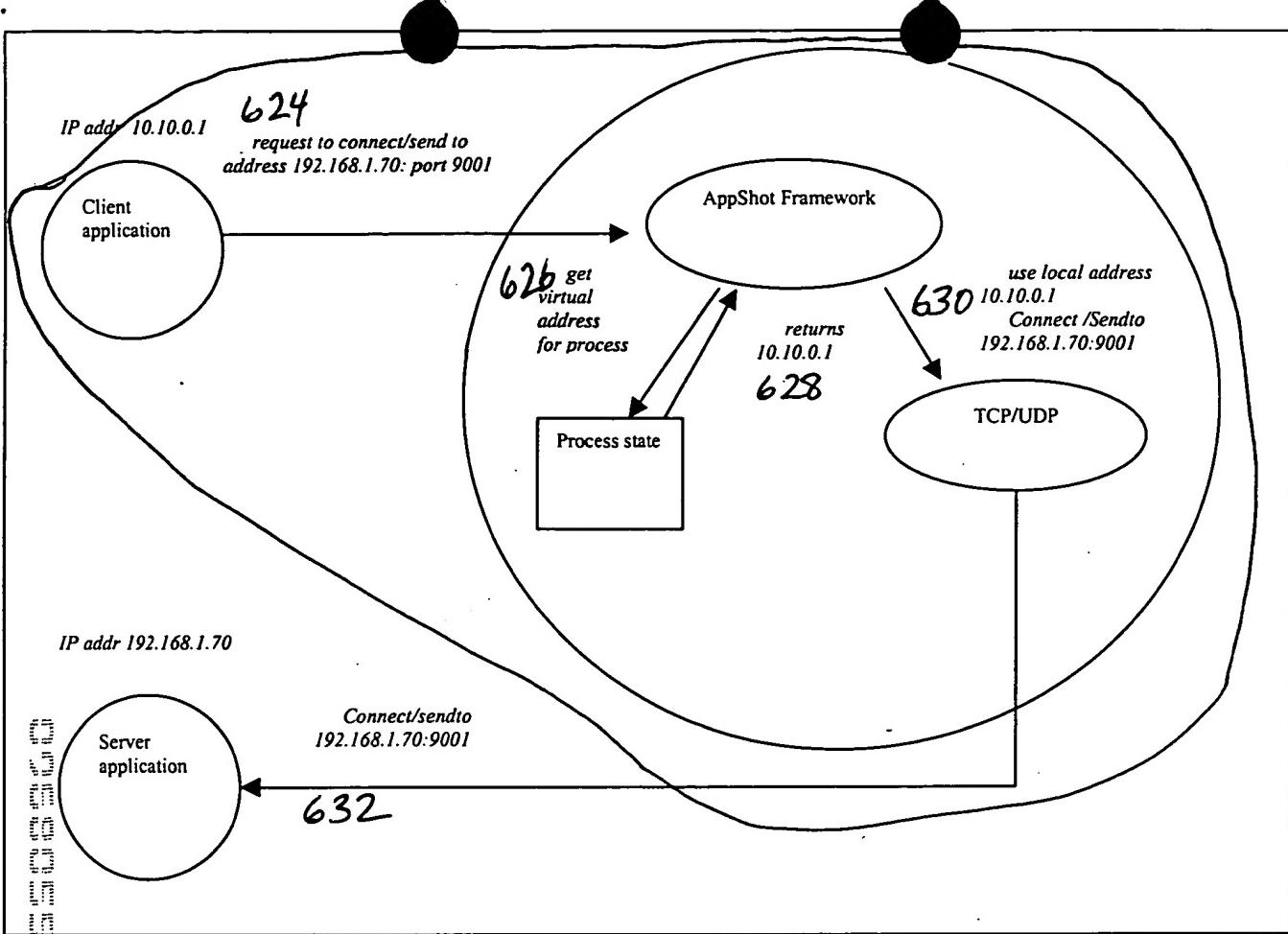


Fig. 18